

CLAIMS

What is claimed is:

1. A circuit breaker switch handle engagement apparatus comprising:

a housing, said housing defines a top wall opposing a bottom wall, a front
5 wall opposing a rear wall, and a left side wall opposing a hinged door, wherein said
hinged door has an L-shaped side wall adjacent thereto and oriented at a right
angle with said hinged door, wherein said L-shaped side wall terminates integrally
at the front wall, said housing is adapted to be removably attached across a circuit
breaker face-plate of a traditional residential and commercial circuit breaker;

10 a mounting means, said mounting means facilitates removable attachment
of said housing across the circuit breaker face-plate;

a handle trip assembly, said handle trip assembly is stored within said
housing, wherein said handle trip assembly actuates movement of an operating
switch handle of the traditional residential and commercial circuit breaker; and

15 a remote control transmitter, said remote control transmitter is adapted to
activate control of said handle trip assembly in a remote manner.

2. The circuit breaker switch handle engagement apparatus of Claim 1,
wherein said hinged door is adapted to be closed in a snap-tight frictional manner.

3. The circuit breaker switch handle engagement apparatus of Claim 1,
wherein said mounting means comprises a plurality of electrically-insulated
telescopic brackets and a cross support, wherein said plurality of electrically-
insulated telescopic brackets includes a first bracket which extends perpendicularly
5 from said left side wall, a second bracket which extends perpendicularly from said
L-shaped side wall, a third bracket which extends perpendicularly from said front
wall and a fourth bracket which extends perpendicularly from said rear wall, wherein
each of said plurality of electrically-insulated telescopic brackets are linearly
adjustable to a desired length and locked via set screw.

10 4. The circuit breaker switch handle engagement apparatus of Claim 1,
wherein said handle trip assembly comprises a worm gear, said worm gear rotates
about a pin mounted atop said bottom wall of said housing, said worm gear
includes gear teeth for meshing with blades of a worm shaft, wherein said worm
15 gear and a plate member have a torsion spring disposed therebetween in order to
maintain contact by said gear teeth with said blades of said worm shaft, thereby
preventing disengagement, said torsion spring has a first arm disposed in an
aperture in said plate member and a second arm disposed in a rectangular void in
said worm gear, wherein said worm gear includes a coupling post mounted

perpendicularly to said worm gear, said coupling post protrudes through a slotted aperture of said plate member of a switch handle engagement arm, and wherein said coupling post defines a circular cap formed integral thereatop for mechanically engaging an upper surface of said plate member, said circular cap circumscribes said slotted aperture of said plate member, thereby preventing removal of said switch handle engagement arm, wherein said switch handle engagement arm defines a downwardly depending prong which bifurcates into a pair of convex tines forming a switch handle engagement cavity, wherein said switch handle engagement cavity is adapted to mate with the operating switch handle of the traditional residential circuit breaker, wherein the operating switch handle is received within said switch handle engagement cavity, thereby facilitating moveable engagement of the operating switch handle by said pair of convex tines.

5. The circuit breaker switch handle engagement apparatus of Claim 4, wherein said handle trip assembly further comprises a motor having a motor shaft adapted to rotate in opposing directions, said motor snugly nests between motor support columns formed integral within said housing, said motor receives driving power via a power source which resides within a power source housing mounted within said housing against said L-shaped side wall, below said motor, said worm

shaft is coupled to said motor shaft via a worm shaft coupler, thus as said motor shaft rotates, said worm shaft rotates therewith via said worm shaft coupler.

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6. The circuit breaker switch handle engagement apparatus of Claim 3, wherein said cross support extends integrally between said first bracket and said left side wall, and said cross support extends between said second bracket and said L-shaped side wall at a vertex of said L-shaped side wall, thereby enhancing structural rigidity to said housing during operation.

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7. The circuit breaker switch handle engagement apparatus of Claim 3, wherein each of said first bracket, said second bracket, said third bracket, and said fourth bracket has a right-angled foot with an anchoring means disposed perpendicularly thereon, said anchoring means is a disc-shaped electromagnet which provides strong magnetic attraction to a metal frame lying peripherally about the circuit breaker face-plate, thereby strongly securing said housing against the metal frame of the circuit breaker-face plate, said disc-shaped electromagnet is

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electrically connected by connecting line to an electrical power source residing within an electrical power source housing, said electrical power source housing is mounted within said housing atop said bottom wall and adjacent said worm gear.

5 8. The circuit breaker switch handle engagement apparatus of Claim 1,
wherein said remote control transmitter is adapted to transmit signals to a receiver
being mounted to said L-shaped side wall of said housing, wherein said receiver
transmits said signals to said motor via connecting line, said remote control
transmitter is equipped with a forward actuation button and a reverse actuation
10 button, wherein said forward actuation button, upon depression, is adapted to
produce signals which are received by said receiver which then transmits said
signals to said motor, whereupon said motor is adapted to then rotate said motor
shaft in a forward direction, said reverse actuation button, upon depression, is
adapted to produce signals which are received by said receiver which then
15 transmits said signals to said motor, whereupon said motor is adapted to then
rotate said motor shaft in a reverse direction, and wherein said remote control
transmitter includes an antenna to facilitate signal transmission, wherein forward or
clockwise rotation of said worm shaft via said motor causes said worm gear to
rotate counterclockwise, thus causing said coupling post to move away from said

motor and engage an end of said slotted aperture of said plate member, and wherein said coupling post continues moving away from said motor, thereby pulling said plate member leftward, resulting in the operating switch handle being set in a leftward position, and thus urging movable contact to engage stationary contact and reestablishing a current path therebetween, and wherein counterclockwise rotation of said worm shaft via said motor results in clockwise rotation by said worm gear causing said coupling post to move toward said motor and engage an end of said slotted aperture, and wherein said coupling post continues moving toward said motor, thereby pulling said plate member rightward, resulting in the operating switch handle being set in a rightward position.

9. The circuit breaker switch handle engagement apparatus of Claim 7, wherein said anchoring means is a suction cup.

10. The circuit breaker switch handle engagement apparatus of Claim 7, wherein said anchoring means is an anchoring plate with bolts.